

CLAIMS

We claim:

1. A medium readable by a data processing device and embodying at least one adaptive personal memory comprising embodiments of:
 - personal information;
 - facts derived from content experienced by at least one relevant user; and
 - facts derived from the relevant user's behavior
2. The medium of claim 1, wherein the facts derived from content comprise a name of at least one person who participated in creation of a relevant piece of content.
3. The medium of claim 1, wherein the facts derived from content comprise a summary of a relevant piece of content.
4. The medium of claim 1, wherein the data structures comprise a hierarchy of linked index nodes, wherein each index node corresponds to a subcategory of information.
5. The medium of claim 4, wherein each index node in the hierarchy comprises at least one link to a content node and at least one field for storing weak links to other index nodes, which weak links do not fit into the hierarchy.

6. The medium of claim 1, wherein the facts derived from user behaviors include at least one record of play sequence commands.
7. The medium of claim 1, wherein the facts derived from user behaviors include at least one record of presence or absence of the user,
8. The medium of claim 1, wherein the facts derived from user behaviors include at least one record of queries.
9. The medium of claim 1, wherein adaptive personal memory includes at least one snapshot, which snapshot data acts as a bias toward a longer term view of user behavior.
10. A data processing system comprising:
 - at least one medium according to claim 1;
 - at least one processor adapted to perform operations to make the medium into a personal adaptive memory, the operations including the following:
 - maintaining adaptive personal memory embodied in the medium;
 - capturing content experienced by the relevant user and the relevant user's behaviors;
 - analyzing the content and behaviors to create updated data; and
 - updating the adaptive personal memory embodied in the medium with the updated data.

11. The system of claim 10, wherein the operations further comprise interfacing with the relevant user responsive to the adaptive personal memory and to acquire more data from the relevant user.

12. The system of claim 11, wherein interfacing further comprises one or more of

- retrieving segments of interest from an external source based on the adaptive personal memory;
- augmenting video programs based on the adaptive personal memory;
- recommending new content based on the adaptive personal memory; and
- creating a personal television channel based on the adaptive personal memory.

13. The system of claim 10, wherein analyzing user behaviors includes determining a level of interest in particular content, responsive to one or more of:

- whether or not the content was viewed in detail;
- what play sequence commands occurred; and
- what queries were made.

14. The system of claim 10, wherein analyzing comprises using snapshot data as a bias toward a longer term view of user behavior.

15. The system of claim 10, wherein at least one of the maintaining, analyzing, and updating steps makes use of non-monotonic logic.

16. The system of claim 15, wherein the non-monotonic logic is modal logic.

17. A data processing system comprising

- the medium of claim 1;
- at least one processor adapted to perform operations including
 - maintaining the medium as a personal adaptive memory in accordance with ongoing user behaviors and content experience; and
 - forming at least one query, responsive to the adaptive memory, for one or more of:
gathering additional content; recommending content; augmenting content; and creating a personal television channel.

18. The system of claim 17, wherein the query comprises seeking out new content having a participant in common with previously experienced content.

19. The system of claim 17, wherein the query comprises seeking out new content having summary information in common with previously experienced content.

20. The system of claim 17, wherein the forming comprises using snapshots as a bias toward a longer term view of user behavior.

21. The system of claim 17, wherein the forming comprises use of non-monotonic logic.

22. The system of claim 17, wherein the non-monotonic logic comprises modal logic.

23. A data processing method comprising executing at least the following operations in a data processing device:

- maintaining at least one adaptive personal memory including:
 - personal information;
 - facts derived from content experienced by at least one relevant user; and
 - facts derived from the relevant user's behavior.

24. The method of claim 23, wherein facts derived from the relevant user's behavior include a record of one or more of

- play sequence commands;
- presence or absence of the user; and
- queries.

25. The method of claim 23, wherein the adaptive personal memory comprises at least some current data and at least some snapshot data, which snapshot data acts as a bias toward a longer term view of user behavior.

26. The method of claim 23 wherein the operations further comprise

- capturing content and summaries experienced by the relevant user and the relevant user's

behaviors;

- analyzing the content and behaviors to create updated personal data;
- updating the adaptive memory with the updated personal data.

27. The method of claim 26, wherein the operations further comprise interfacing with the relevant user responsive to the adaptive personal memory and to acquire more data from the relevant user.

28. The method of claim 26, wherein at least one of the maintaining, analyzing, and updating steps makes use of non-monotonic logic.

29. The method of claim 28, wherein the non-monotonic logic is modal logic.

30. The method of claim 26, wherein the operations further comprise forming at least one query, responsive to the adaptive memory, for one or more of: gathering additional content; recommending content; augmenting content, and creating a personal television channel.

31. The method of claim 30, wherein forming includes use of non-monotonic logic.

32. The method of claim 31, wherein the non-monotonic logic includes modal logic.

33. The method of claim 32, wherein the forming comprises using snapshots as a bias toward a longer term view of user behavior.

34. At least one medium readable by at least one data processing device and embodying code for causing the data processing device to perform operations comprising:

- maintaining at least one adaptive personal memory including:
 - personal information;
 - facts derived from content experienced by at least one relevant user; and
 - facts derived from the relevant user's behavior.

35. The medium of claim 34, wherein facts derived from the relevant user's behavior include a record of one or more of

- play sequence commands;
- presence or absence of the user; and
- queries.

36. The medium of claim 34, wherein the adaptive personal memory comprises at least some current data and at least some snapshot data, which snapshot data acts as a bias toward a longer term view of user behavior.

37. The method of claim 34 wherein the operations further comprise

- capturing content and summaries experienced by the relevant user and the relevant user's behaviors;
- analyzing the content and behaviors to create updated personal data;
- updating the adaptive memory with the updated personal data.

38. The medium of claim 34, wherein the operations further comprise interfacing with the relevant user responsive to the adaptive personal memory and to acquire more data from the relevant user.

39. The medium of claim 34, wherein at least one of the maintaining, analyzing, and updating steps makes use of non-monotonic logic.

40. The medium of claim 39, wherein the non-monotonic logic includes modal logic.

41. The medium of claim 34, wherein the operations further comprise forming at least one query, responsive to the adaptive memory, for one or more of: gathering additional content; recommending content; augmenting content, and creating a personal television channel.

42. The medium of claim 41, wherein forming includes use of non-monotonic logic.

43. The medium of claim 41, wherein the non-monotonic logic includes modal logic.

44. The medium of claim 42, wherein the forming comprises using snapshots as a bias toward a longer term view of user behavior.

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